

REMARKS

Interview Summary

Applicant's representative appreciates the courtesy of Examiner Chowdhury in granting at the interview on June 5, 2003 to discuss claims 1, 15, 20-22, 30 and 37-39. At the interview, applicant's previous arguments were discussed with respect to the use of a smooth Al_2O_3 layer. Applicant's representative was informed that "the degree of smoothness" needed to be included in the claims to define patentability.

The restriction/election was also discussed and applicant's representative agreed to cancel all claims to embodiments with an aluminum alignment layer, which has been done by the amendments above.

Election/Restriction

Claims 11, 36, 39 and 40 define liquid crystal films or layers and are generic to the elected subject matter. These claims should be included with the examined claims once the claims upon which they depend are allowed (claims 1 and 30). Similarly, claim 16 should be examined and allowed once the claim upon which it depends is allowed (claim 15).

Claim Amendments

Claims 1, 15, 20 and 30 have been amended to include the language,

"with a surface sufficiently smooth such that liquid crystal films formed thereon can be removed in one piece."

Claims 2-4, 10, 20, 30-35 and 37-40 have been amended so that the format is consistent with the other claims and to correct minor errors.

New claims 41 and 42 are consistent with claim 1 and define liquid crystal films/ layers with homeotropic alignment achieved by an Al_2O_3 aligning layer on a polymeric substrate. Claim 41 is similar to claim 39 and defines the degree of smoothness of Al_2O_3 layer as having "fewer pores than aluminum oxide layers prepared by evaporation methods or sputtering, " Claim 42 characterizes the Al_2O_3 layer by the PET substrate it is positioned on as suitable for use as transparent food

packaging. In the previous response, Applicants argued that the cited references do not show or suggest the use of a plastic substrate. This plastic substrate is further defined in claim 42, and is clearly not shown or suggested by the cited references .

These amendments address issues already raised at the interview and in the office action and serve to reduce the issues on appeal. Therefore, they are appropriate under 37 CFR § 1.116.

Krueger et al. (U.S. Patent 4,112,157) and the Bahadur Publication

As indicated in the response dated December 22, 2002, neither reference provides any indication or suggestion that the aluminum oxide layers formed are smooth or should be made smooth. These arguments were not considered persuasive since the degree of smoothness was not characterized in the claims prior to the above amendments. There is clearly no indication that the alignment layer should be made smooth such that “liquid crystal films formed thereon can be removed in one piece,” as defined in claims 1, 15, 20, 30 and the claims which depend thereon. There is no evidence that these references teach that any liquid crystal films formed on the alignment layer can be removed at all, let alone removed in one piece.

As to new claim 41, there is also no indication that the Al_2O_3 layers formed have fewer pores than aluminum oxide layers prepared by evaporation methods or sputtering .

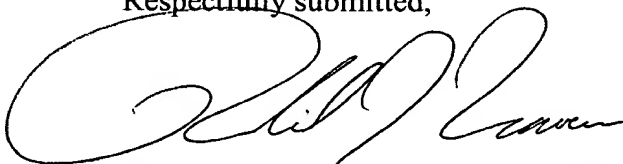
As to new claim 42, there is also no indication that the aligning layer can comprise a thin transparent Al_2O_3 layer positioned on a thin PET substrate that is suitable for use as transparent food packaging. The cited references provide no guidance that such a substrate would be suitable.

Etzbach et al. (US 5,780,629) combined with Krueger and Bahadur

Etzbach et al. adds nothing to the teachings of Krueger et al and Bahadur to suggest the use of alignment layers as defined in claim 30, (the claim upon which claim 37 depends). Therefore, the liquid crystal films of claim 37 are unobvious in view of the combined teachings of these references.

Based on the above remarks, Applicants submit all pending claims are in form suitable for allowance and patentable over the cited references. Therefore, withdrawal of the rejections and allowance of these claims are earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. J. Traverso', written over a large, stylized circular flourish.

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